



## NEWS

The purpose of this publication is to provide communication within the Naval Aviation Medicine community. Material published is for the information of Navy Flight Surgeons only and does not necessarily imply any official endorsement by the Navy.

OCTOBER 1971

My Fellow Flight Surgeons,

I have now officially relieved Captain Jahnke as Assistant Chief for Aerospace Medicine in the Bureau of Medicine and Surgery. In the short time that I have been here I have learned many things, the foremost of which is that Navy Aerospace Medicine is facing a demanding and challenging future. New concepts are constantly being presented for consideration and adoption. New and better methods of accomplishing old tasks are being suggested and introduced. An excellent example of this is the establishment of the Naval Regional Medical Center in the Tidewater Area at Norfolk.

In the months to come I intend to visit many of you in your home stations or hospitals. I am anxious to hear your ideas and to learn your feelings concerning not only naval areas but personal ones as well. In the meantime, I would like to urge all of you, junior and senior, to write to me when you have something to communicate. Only in this way can Aerospace Medicine continue as a dynamic integral segment of today's modern naval medical team. Also, when you are in the Washington area, please visit us in the Bureau. I am looking forward to making new acquaintances as well as renewing old ones.

Finally, let me say that I am very happy to be here, and I am anticipating a mutually rewarding relationship with each one of you.

Sincerely,

E. A. JONES

Captain, MC, USN

Assistant Chief for

Aerospace Medicine

ABDOMINAL PAIN AND DISTENSION. WHILE FLYING FOLLOWING  
SUBTOTAL SMALL BOWEL RESECTION

CDR W. R. Crawford, MC, USN and LT G. D. Smith, MSC, USNR  
Aero Medical Branch Service Test Division  
Naval Air Test Center

A 26 year old Naval aviator, P.B., suffered blunt abdominal trauma as a result of a head-on automobile collision. He was saved from apparent injury, and from being thrown forward, by his seat belt. The patient went into deep shock about 45 minutes after the mishap and emergency surgery was performed at a nearby military hospital.

At laparotomy an avulsion of the midportion of the mesentery of the small intestine was noted, extending from an area 1 1/2 to 2 feet distal to the ligament of Trietz to an area 2 to 2 1/2 feet proximal to the ileocecal valve. Ninety-seven inches of small bowel were resected and a closed anastomosis was performed, leaving approximately 2 feet of proximal jejunum and 2 1/2 feet of distal ileum.

The postoperative course was uneventful. The anticipated diarrhea abated after several weeks, and he did well thereafter. A small bowel series, done on a routine basis three months later, showed a transit time of 30 minutes. The duodenum and the remaining several feet of jejunum and ileum appeared normal.

The patient continued to do well and was returned to full duty including flight status. Shortly afterwards he experienced moderately severe crampy abdominal pain while flying at approximately 4,000 feet cabin altitude. The pains disappeared after landing, but diarrhea, consisting of three to four loose, watery stools daily, ensued. This was poorly controlled with Probanthine and Lomotil, however the symptoms gradually subsided over two week's time.

Several weeks later, while in flight to Bermuda, P.B. again experienced severe abdominal crampy pain at about 5,000 feet cabin altitude. Diarrhea continued and was unresponsive to medicines. He was hospitalized in Bermuda for control of diarrhea, and subsequently was transferred to the Navy Hospital, Patuxent River, Maryland for evaluation.

At Patuxent River he was placed on a normal diet and taken off all medicines. He rapidly became asymptomatic with single, daily well-formed bowel movements. After one week he was allowed to subsist out of the hospital. Stool samples were collected three times weekly for one month and were found to be soft but not watery and had normal fat content. The disability was thought to be a complication of the bowel resection exacerbated by hypobaric conditions. The Aero Medical Branch at the Naval Air Test Center was asked for assistance in reaching a decision whether the patient should continue in aviation.

In order to determine the extent of intestinal distension caused by altitude exposure, and to relate abdominal discomfort with specific altitudes, he was exposed to high altitude conditions in a low pressure chamber under the direction of medical monitors.



The patient was placed in a supine position inside a Guardite, Model 9A2, low pressure chamber used for test and training purposes by the Aero Medical Branch. A cloth tape measure was secured around the pilot's waist to measure changes in abdominal dimensions with altitude. X-rays of the patient's abdomen were taken with a Picker portable x-ray unit during chamber ascent and descent. The pressure in the chamber was reduced at a rate of 500 feet per minute until a terminal altitude of 7,000 feet was reached. Waist measurements, x-rays, and verbal comments by the pilot concerning any abdominal disturbances were recorded during the ascent, at 1,000, 2,000, 3,000, 4,000, 5,000, and 7,000 feet, and during the descent at 4,000 and 3,000 feet and upon reaching sea level again. Total elapsed time for the exposure to low pressure was 53 minutes.

A sensation of increased intestinal motility was reported by P.B. at 1,000 feet and confirmed by inside medical monitors. Sharp transient pains were noted as low as 2,000 feet of altitude. At 6,500 feet the subject reported a moderate "tightness" and general discomfort in his entire abdomen. At the terminal altitude of 7,000 feet he reported abdominal tightness with associated pain located in a rather discrete two inch band around his abdomen at waist level. Waist measurement showed an increase in girth of 2 in. from sea level to 7,000 feet. During the descent the tightness subsided. Abdominal measurements decreased as the altitude was decreased, and were normal upon reaching sea level.

At no time during the 53 minute evaluation did P.B. pass flatus. Auscultation of the abdomen revealed loud bowel sounds coincident with the transient, moderately severe pain reported by P.B. No diarrhea resulted from the exposure.

The x-rays revealed distension but lack of apparent movement of the intestinal gas on serial films taken during the procedure. The x-rays did not contribute to a formulation of the problem. In fact, resolution of this pilot's flight status remained to the judgment of the several cognizant flight surgeons.

It was recommended, on the basis of the history and the low pressure chamber demonstration, that the pilot was no longer physically suited for flying responsibilities as a result of the bowel resection. The pilot concurred in the recommendation and requested a change of designator.

Although this case is not without precedent, it represented a unique combination of resources to document the effects of altitude flying on a pilot with significantly reduced bowel length. It is suggested that any aircrew personnel who have had bowel resections be subjected to altitude stress in a low pressure chamber prior to being returned to full duty.

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Congratulations to the following Flight Surgeons who have recently completed the residency in Aerospace Medicine and have been certified as specialists by the American Board of Preventive Medicine in Aviation Medicine:

LCDR Charles H. Bercier, JR., MC, USN  
LCDR John A. Calcagni, MC, USN  
CDR Larry R. Fout, MC, USN

LCDR Daniel B. Lestage, MC, USN  
CDR George M. Stone, II, MC, USN

## CAPTAIN JAHNKE RETIRES

A retirement ceremony was held in the Surgeon General's office on 30 June 1971 for Captain L. P. Jahnke, MC, USN, the past Director of the Aerospace Medicine Operations Division. At the ceremony Captain Jahnke was presented the Legion of Merit by Vice Admiral George M. Davis, MC, USN, Surgeon General, acting for the President. The following citation accompanied the award:

For exceptionally meritorious service from March 1967 through June 1971 as Director, Aerospace Medicine Operations Division, and subsequently Assistant Chief for Aerospace Medicine, Bureau of Medicine and Surgery, Navy Department, Washington, D. C. During his four-year tenure in the Bureau of Medicine and Surgery, Captain Jahnke developed programs which improved utilization and enhanced retention of flight surgeons in the Navy. Among his innovations were the establishment of flight surgeon billets in our larger naval hospitals to provide advisors and consultants in the care and disposition of aviation personnel; the establishment of a nucleus of highly trained flight surgeons in clinical residencies; and the development of programs whereby operationally experienced flight surgeons can obtain clinical refresher training to enhance their value to operational and clinical medicine. These programs have been directly responsible for the retention of qualified and motivated flight surgeons and have upgraded the degree of medical care available to aviation personnel and their dependents. To improve the lines of communication between the Bureau of Medicine and Surgery and the operating forces, Captain Jahnke reestablished the Flight Surgeon's Newsletter, a professional publication designed to provide for an interchange of information within the naval aerospace medical community. Through steadfastness in purpose and integrity of action, Captain Jahnke upheld the highest traditions of the Medical Corps and the United States Naval Service.

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The following residents were selected for DIFOT at the first year level.

<u>NAME</u>	<u>HOSPITAL</u>	<u>SPECIALTY</u>
LCDR John J. Bouvier, MC, USN	San Diego	Internal Medicine
LCDR William M. Houk, MC, USN	NROTCU, University of Rochester	Nuclear Science
LCDR David A. John, MC, USNR	Bethesda	Anesthesiology
LCDR George A. Luiken, MC, USNR	San Diego	Internal Medicine
LCDR Gary L. Pease, MC, USN	San Diego	Otolaryngology
LCDR Rex L. Repass, MC, USNR	Oakland	Ophthalmology
LCDR Paul E. Sydlowski, MC, USNR	Bethesda	Ophthalmology
LCDR George G. Telesh, MC, USNR	Philadelphia	Orthopedic Surgery
LT Delbert H. Hahn, MC, USNR	Oakland	Radiology
LT Gordon L. Levin, MC, USNR	Oakland	Orthopedic Surgery



## PHYSICAL EXAMINATIONS

"Always read the fine print before you sign" is a valuable rule which saves people in all walks of life many problems. Flight Surgeons should apply this same axiom to everything they sign; you wouldn't sign a prescription without first reading it. Use the same thoroughness and caution before affixing your signature to flight physical examination forms.

Recent correspondence from the Chief of Naval Training has expressed grave concern for the high percentage of flight candidates who are physically disqualified on their entrance flight physical at Pensacola and its resulting cost. The cost of sending a candidate to Pensacola, and then returning him home, two PCS moves, is an extremely critical factor at this time of belt tightening. PCS funds are quite short throughout the Navy. This shortage may result in some measures which could affect all of us, such as lengthening of tours or even a complete freeze on all PCS moves. From 7-10% of all flight candidates are found physically disqualified at NAMI.

What can the Flight Surgeon do to reduce this percentage of error? Many factors come to mind which contribute to this high disqualification rate, but the one which is paramount and most obvious is the quality of the flight physical examination. Physical examinations reviewed in BUMED have shown a trend toward an increase in the number of physicals returned due to errors, omissions, need for additional information or lack of legibility. This all adds up to sloppiness any way you cut it. All Flight Surgeons are urged to review the Manual of the Medical Department for up-to-date requirements. The provisions of chapter 15-73-2 state that the Standard Form 88 on all candidates will be typewritten. This will be enforced, no exceptions and no pre-typed forms will be accepted. All positive checked items on SF 89/93 must be clarified or elaborated on under item 40 (BUMED 15-60-9). A stamped reply that all positive checked items have been investigated is unacceptable and will be returned; this stamped reply does not help anyone evaluating this physical in the future.

Great care must be taken in the eye examination. A cycloplegic refraction must be accomplished on all candidates. Do not record the candidate's prescription or the findings of a previous cycloplegic to fill this requirement; do a refraction. Only too frequently, it is noted that identical refractive findings are recorded on successive years only to obtain grossly different disqualifying findings when the candidate is refracted in Pensacola. It should be noted that all candidates who have not had a cycloplegic refraction within 12 months of entering flight training are refracted at Pensacola.

Although physical examinations seem like a boring non-productive part of your task as a Flight Surgeon, it is a very important vital task. It is a specialized task for which you are specially trained and designated. Your signature on the P.E. is your certification that you examined the candidate and that the findings are as recorded. If you are not certain or satisfied with some findings, re-examine or get a consultation but do not sign until you are certain; it's your reputation, it's your signature. All senior medical officers are urged to review all P.E. for accuracy, completeness and in some cases interpretation of the findings. They should sign the 88 in the designated space prior to submission.

If in doubt about a candidate's qualification, elaborate and submit all the findings for a BUMED decision; don't qualify the candidate with the idea that Pensacola will make the decision. Don't qualify any candidate until you are 100% certain that he is qualified.

We know other factors such as candidates' change of motivation, administrative pressure, and the pressure to see other patients all contribute to this difficult problem. Do your part. When you put your name on the line, be certain you know what you are signing.

(BUMED-514)



## N T P I

BUMED Instruction 6470.10 of 19 July 1971 concerning initial management of irradiated or radioactively contaminated personnel is highly recommended reading for all Flight Surgeons. You will all be part of an NTPI either at your base or aboard the carrier. This instruction clearly demarcates the medical department's area of responsibility and all personnel should be familiar with it. This instruction with the references listed in section J should be readily available in the case of any nuclear accident.

BUMED Code 74 will answer any questions relative to the implementation of this instruction.

(BUMED-514)

### NAVAL AVIATOR/FLIGHT SURGEON COMMENCES OPERATIONAL TRAINING

Lieutenant Commander William R. Davis, MC, USN, became the fifteenth dually designated Navy Flight Surgeon on active duty when he was graduated from flight training as a naval aviator on 15 June 1971. Bill has been assigned to full-time training as a replacement pilot in VF-101 at the Naval Air Station, Oceana and upon completion will join VF-103 for a tour of operational duty with Air Wing Three stationed at Oceana and aboard the USS SARATOGA (CVA-60). During this assignment Dr. Davis will fly as a line pilot and work with the two regularly assigned air wing Flight Surgeons on aviation medicine matters. In his collateral duties he will put to use his experience and training to work as the aeromedical safety assistant to the squadron and airwing commanders with the aim of identifying aeromedical and human error hazards in fighter aviation operations. This is particularly significant today as the overall navy accident rate has been coming down due to a reduction in materiel and maintenance failure accidents, but with no significant reduction occurring in accidents due to human errors.

(AIRLANT STAFF MEDICAL OFFICER)

### MR. CHESTER R. H. MCCARL RETIRES

On 30 September 1971, Mr. Chester McCarl, Supervisory Lay Medical Reviewer of the Physical Qualifications Branch (Code 511) retired. Known to hundreds of Naval Flight Surgeons as "Mr. Mac", Mr. McCarl completed thirty-two consecutive years of faithful and loyal service to Aviation Medicine in this Branch, and a total of 37 years government service. His long tenure in the Code provided him with a wealth of experience, as well as complete and accurate background information in helping to solve problem cases, and he served as "the strong right arm" of the Medical Officer of the Branch for years. Because of his truly exemplary and outstanding performance over these many years, Mr. McCarl was recommended for the Superior Civilian Service Award, which is the highest award granted to civilian personnel by the Surgeon General.

"Mr. Mac's" tactful and helpful advice, kind smile, and sincere devotion to Aviation, will be greatly missed by all who have worked with him. We wish him the very best during his well-deserved retirement.

## THE INNOCENT MURMUR

Commander Kevin C. Stanton, MC, USN  
Naval Aerospace Medical Institute  
Naval Aerospace Medical Center  
Pensacola, Florida

Finding a short, soft, systolic murmur in a healthy young applicant for flight training can generate a great deal of concern for both the examining physician and the applicant. The flight surgeon must make a decision whether to refer the applicant for further study, and perhaps look foolish in the eyes of the consultant; or to call the murmur innocent and take the chance of missing an organic defect. The applicant is at a true crossroads: if he is denied admission to the Navy because of the murmur, a diagnosis of organic heart disease will follow him the rest of his life. He will be denied or rated for life insurance. On the other hand, if an organic lesion exists and is not identified, he may be denied precautions against subacute bacterial endocarditis with potentially disastrous results. The following is offered to aid the flight surgeon in making this sometimes difficult decision.

Innocent or "physiologic" murmurs can be heard in up to 50% of adolescent males. Obviously a fair percentage of these will retain their murmurs into the early twenties - the group we are concerned with. In the absence of obvious chest deformity the following features of the innocent murmur should be specifically evaluated.

1. Systolic in timing.
2. Short duration - not pansystolic or late systolic.
3. Soft in intensity - grade 2/6 or less.
4. Heard over entire precordium, but does not radiate to the axilla or back. Soft radiation into the carotids is common in the so-called hyperdynamic murmurs (rapid heart rate, systolic BP elevation, sweaty palms, etc.).
5. Absence of a diastolic murmur - detection of soft diastolic murmurs requires a good stethoscope. Most of the standard issue "cheapie" stethoscopes are woefully inadequate in this regard.
6. Normal respiratory movement of the second sound - i.e. closes with expiration.
7. May change markedly with position - but absence of positional change is not against the murmur being innocent.
8. No other evidence of organic heart disease - negative history, normal ECG, and normal chest x-ray.

Any deviations of the murmur from the above criteria should provoke the examining flight surgeon into asking for a consultation with perfect justification. A murmur that meets all of the above criteria can be considered "innocent" with equal justification and a clear conscience.



## A WHITE PILL

LT William S. Barry, MC, USNR

Two aircraft overhead with pilots and co-pilots incapacitated by abdominal pain. An unconscious driver at the wheel of a tractor crashes into a parked aircraft. Aircontrollers in the tower not responding to the radio just looking out watching the sunset.

Sabotage? Mass insanity? Freakout station #1? No! The above hypothetical situations are all possible dangers of A WHITE PILL. Most aviation personnel are aware that taking medications while in a flight status can be dangerous. Yet certain medications are taken without a second thought - salt tablets, C-P tablets, aspirins. While these medications in themselves can cause problems, it's their acceptance without question that presents a hazard.

At a naval air station in Vietnam, the practice of dispensing C-P and salt tablets at the messhall provided an easy access to these necessary drugs used in that area. As formal dispensing machines were not available, paper cups were used. This appeared to be an efficient method of dispensing the tablets to all the personnel. The problem was that the pills in the salt cup were not salty, they were bitter. This discrepancy could be explained away by the unwary as "a different brand", "military issue", or "nothing tastes right today". In this case the salt cup was filled from a large brown bottle of white pills kept in the office. The salt pills were always poured out from this salt tablet bottle - but this wasn't the bottle - it was aspirin for the local headaches. It could just as well have been coumarin, disulfiram, a diuretic, an antibiotic, a barbiturate, or a carbonic anhydrase inhibitor. These white tablets could produce allergic reactions or incapacitating side effects to unsuspecting users.

The taking of the wrong medication from a medicine cabinet has its accident equivalent with the taking of the white pill in the paper cup. Medication is not candy and all medications should be checked upon dispensing and protected by the users. Only precautionary measures can prevent accidents, injuries, and death.

The dispensing of all drugs whether they are aspirin, C-P or salt tablets are the responsibility of the medical department. Active supervision by medical department personnel of all programs of drug dispensing is mandatory.

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OPNAVINST 3710.7F

In view of some recent changes noted in OPNAVINST 3710.7F, it appears appropriate to make the following suggestion: When aircrew personnel check in or have their annual physicals, the flight surgeon should review the individual's NAVMED 6150/2 to verify currency of physiology training.

Changes of note to the subject instruction are:

(1) Emergency Egress Systems. Ejection seat training at a physiology training activity shall be accomplished initially prior to flight in an aircraft equipped with an ejection seat and subsequently, prior to flight in an aircraft with a different type ejection seat system from the one they are currently flying in.

(2) Visual Problems. Visual problems includes night vision, flash blindness, and spatial disorientation training. Flash blindness training is now required of all crewmen. Crewmen is defined on page 1-3 of subject OPNAVINST.

(BUMED-512)



# FLIGHT SURGEONS ORDERS RECENTLY ISSUED

NAME	FROM	TO
LCDR J. O. Houghton	First Marine Air Wing	NAS, Alameda
CAPT H. W. Hill	NAS, Moffett Field	MCAS (H) New River, N.C.
CDR D. P. Hoback	USS ROOSEVELT (CVA-42)	NAS, Point Mugu
CDR C. G. Jeffrey, Jr.	USS FORRESTAL (CVA-59)	NAS, Meridian, Miss.
LT L. A. Olson	FAW-3, Brunswick, Me.	VP-10, Brunswick, Me.
LT L. A. Kreider	FAW-3, Brunswick, Me.	VP-44, Brunswick, Me.
LT H. D. Bresnahan	FAW-3, Brunswick, Me.	VP-11, Brunswick, Me.
LT R. D. Blose	FAW-3, Brunswick, Me.	VP-23, Brunswick, Me.
LT G. L. Levin	NAVHOSP, Oakland - Duty	NAVHOSP, Oakland-DIFOT FS (ADDU)
LT D. H. Hahn	NAVHOSP, Oakland - Duty	NAVHOSP, Oakland-DIFOT FS (ADDU)
LT R. L. Repass	NAVHOSP, Oakland - Duty	NAVHOSP, Oakland-DIFOT FS (ADDU)
LCDR G. G. Telesh	NAVHOSP, Philadelphia - Duty	NAVHOSP, Philadelphia - DIFOT FS (ADDU)
LCDR G. L. Pease	NAVHOSP, San Diego - Duty	NAVHOSP, San Diego-DIFOT FS (ADDU)
LCDR G. A. Luiken	NAVHOSP, San Diego - Duty	NAVHOSP, San Diego-DIFOT FS (ADDU)
LCDR J. J. Bouvier	NAVHOSP, San Diego - Duty	NAVHOSP, San Diego-DIFOT FS (ADDU)
LCDR P. E. Sydlowski	NAVHOSP, NATNAVMEDCEN, Bethesda Duty	NAVHOSP, NATNAVMEDCEN, Bethesda DIFOT FS (ADDU)
LCDR D. A. John	NAVHOSP, NATNAVMEDCEN, Bethesda Duty	NAVHOSP, NATNAVMEDCEN, Bethesda DIFOT, FS (ADDU)
LCDR G. L. Koomos	NAVHOSP, Portsmouth, Va.-Duty	NAVHOSP, Portsmouth, Va.-DIFOT FS (ADDU)
LCDR R. P. B. Hayes	VAP-61, Agana, Guam	VQ-3, Agana, Guam
LCDR L. J. Van Keulen	NAVHOSP, San Diego - Duty	3rd Marine Air Wing, El Toro
CDR D. R. Stoop	NAVHOSP, Pensacola - Duty	NAVAEROSPMEDINST, Pensacola, Fla.
LCDR W. M. Houk	NROTCU, Univ. of Rochester-Duty	NROTCU, Univ. of Rochester-DIFOT FS (ADDU)
CDR W. O. Buck	Inactive	3rd Marine Air Wing, El Toro, Calif.
LT J. W. Maida	FAW-11, Jacksonville, Fla.	VP-16, Jacksonville, Fla.
LT F. A. Brindle	FAW-11, Jacksonville, Fla.	VP-45, Jacksonville, Fla.
LT B. F. King	FAW-11, Jacksonville, Fla.	VP-5, Jacksonville, Fla.
LT D. R. Bakken	FAW-2, Barbers Pt.	VP-17, Barbers Pt.
LT F. W. Miller	FAW-2, Barbers Pt.	VP-6, Barbers Pt.
LT E. S. Golladay	FAW-2, Barbers Pt.	VP-4, Barbers Pt.
LT B. S. Myers	FAW-2, Barbers Pt.	VP-1, Barbers Pt.
LT J. J. Williams	COMFAIRMOFFETT, Moffett Field	VP-9, Moffett Field
LT C. P. Daspit	COMFAIRMOFFETT, Moffett Field	VP-19, Moffett Field
LT E. H. Johansson	COMFAIRMOFFETT, Moffett Field	VP-40, Moffett Field
LT C. F. Morris	COMFAIRMOFFETT, Moffett Field	VP-47, Moffett Field
LT W. H. Barnaby	COMFAIRMOFFETT, Moffett Field	VP-48, Moffett Field
LT R. E. Smith	COMFAIRMOFFETT, Moffett Field	VP-50, Moffett Field
LCDR J. R. Burnett	Staff, Deputy Commander, Patuxent River, FAW-5	VP-49, Patuxent River
LT H. L. Bush	Staff, Deputy Commander, Patuxent River, FAW-5	VP-24, Patuxent River

## VINYL EAR PAD SURVEY

Investigations of the condition of vinyl ear pads in protective helmets have been conducted at several activities at the request of the Naval Air Systems Command.

The results of an analysis and evaluation of the reports indicate that a degradation of the vinyl ear pad occurs. However, there does not appear to be a temporal trend, on the basis of either time in use or time installed, which could be used as a guide to establishing a calendar replacement schedule. Past experience and conjecture indicate that a large portion of the degradation process is caused by a mechanical/chemical interaction of the vinyl with particular types of perspiration and/or local body excretions.

It is suggested squadron Flight Surgeons compare new vinyl ear pads to those in use by squadron personnel and take action to replace the outer ear pad when it reaches the condition where the protective function is not being fulfilled.

(BUMED-522)







